

## Comprehensive History and Physical

Date of Visit: 03/17/2009

**HISTORY OF PRESENT ILLNESS:** [REDACTED] was recently hospitalized to the Massachusetts General Hospital. Infectious disease was consulted by Dr. [REDACTED] during that hospitalization regarding frozen report of a scapular biopsy that was read as possible old necrotizing granulomas. Please see our notes from that hospitalization. Final pathology returned last evening and shows necrotizing granulomas with extensive polymorphonuclear cell infiltration. Special stains for organisms were negative. The pathology is not consistent with sarcoid and is most consistent with an acute and chronic osteomyelitis with histiocytic infiltration with a propensity towards granuloma formation. Of note, Gram stain mycobacterial and fungal stains were all negative. In microbiology (and corresponding stains were negative in pathology) and routine culture, aerobic and anaerobic, fungal cultures and mycobacterial cultures are negative for no growth to date.

The etiology of [REDACTED] 2 lesions, 1 in the left scapular and 1 in the right femur, are not clear. They have periosteal bone reaction. Of note, [REDACTED] reports no fevers. He has a normal white count. He is not anemic. He has a normal globulin. His platelet count is normal and not elevated. He feels well except for shoulder pain and to physical examination no other abnormalities are noted. A chest pet cat CT scan was performed at an outside hospital. Although we do not have the original films, that PET scan was only notable for the 2 lesions (right femur and left scapula) and although there was some mention of mediastinal lymphadenopathy, review of the original report from the outside hospital disclosed no lymph nodes in the mediastinum greater than 1 cm in size. No pulmonary abnormalities were noted. A chest x-ray performed at Massachusetts General also disclosed no obvious abnormalities.

From an infectious disease perspective, the possibilities include partially treated bacterial osteomyelitis. The 2 locations would be highly atypical for this. We will review with Mr. [REDACTED] whether any antibiotics were taken over the last couple of months, however, the culture negative for results here, absence of organisms seen on special stains, the granulomatous nature and the absence of systemic symptoms would all make typical pyogenic osteomyelitis not very likely. Although mycobacterial infections can be associated with osteomyelitis. They most commonly involve either immunocompromised individuals when they involve the appendicular skeletal or the axial skeletal, especially the spine, in individuals who are immunocompromised. The absence of symptoms, the evidently normal chest x-ray and CAT scan, the absence of lymphadenopathy, and the involvement of a scapular lesion and a femur would make tuberculosis or atypical mycobacterial osteomyelitis not very likely. A PPD was planted before. [REDACTED] left the hospital and was to be read at his local hospital; we need to check on that result. Consideration should also be given to repeating a CAT scan here at Massachusetts General of the chest to evaluate by thin cuts for any pulmonary abnormalities and if the PPD was not formally read as negative, consideration should be given to repeating it or to performing a QuantiFERON Gold assay.

Fungal infections may cause granulomatous osteomyelitis. However, the absence of pulmonary symptoms, the absence of pulmonary symptoms and the absence of evidence of fungi on good pathological operative room-obtained specimens and negative fungal cultures make these less likely. A urine histoplasmosis antigen is also negative. Serum should be sent for fungal panel antibody panel to rule out coccidioidomycosis, blastomycosis, histoplasmosis. Sporotrichosis can cause similar lesions. However, the absence of subcutaneous or lymphadenopathy, the absence of high exposure to roses or gardening and the absence of seeing fungal forms on pathological

culture and negative fungal cultures make this diagnosis unlikely. [REDACTED] has never traveled to an area of the world with penicilliosis. He did travel briefly to Paraguay in the past and although South American blastomycosis can cause bone lesions the absence of oral or pulmonary lesions would make this not very likely as would the absence of finding fungal forms on pathological analysis or on fungal cultures. Despite this, we will send fungal serologies, and also will check a cryptococcal serum antigen as the next steps.

From a bacterial perspective, brucellosis may cause osteomyelitis. However, it usually involves the axial spine and individuals are usually symptomatic. To be safe, we will check a Brucella antibody. Salmonellosis can also cause granulomatous osteomyelitis. However, usually in individuals with hemoglobinopathies. We will assess with [REDACTED] whether there is any family history of blood disorders and his ethnic background. However, he is not anemic and the negative bacterial cultures would make this less likely. Bartonellosis also can cause similar bone lesions that may be appendicular. However, there is no major cat exposure. However, we will check Bartonella serology. Syphilis can cause gummatous reactions in various lesions of the body including with periosteal bone reactions and we will check an RPR. Melioidosis can cause similar lesions although usually in older individuals or immunocompromised individuals and almost always in the setting of having either subcutaneous involvement or pulmonary involvement. [REDACTED] has also not traveled to areas of the world most endemic for melioidosis. However, a serology can be sent. Q fever is possible. It has been associated with repetitive and chronic granulomatous osteomyelitis and perhaps is one of the more likely on the infectious disease list in the setting of the absence of systemic symptoms. It also would not be organism (Coxiella burnetii) would not have grown on routine cultures and normal stains would not pick this organism up. We will send serology for Q fever.

Noninfectious causes that Pathology feel are not particularly likely would include sarcoidosis, histiocytosis, metabolic bone disorders and lipodosis. We will see [REDACTED] in followup in Infectious Disease Clinic, will send the above serologies and tests and would recommend a repeat CAT scan of the chest to assess for any abnormalities not previous evident. We would also recommend blood cultures to be checked.

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[REDACTED]  
Director of Tropical & Geographic Medicine Center

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